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Mid-Atlantic
Wood Preservers Inc.

May 29, 1987

Mr. Dennis P. Carney, Chief
DELMARVA-DC/WV CRES
Hazardous Waste Enforcement Branch
U S E P A Region III
841 Chestnut Bldg.
Philadelphia, Pa. 19107

Subject: Expansion of Concrete Pad

Dear Mr. Carney:

We are in receipt of a letter dated April 28, 1987, from Charles R. Taylor, Jr., Assistant Attorney General, concerning a proposed additional concrete pad at the Mid-Atlantic Wood Preservers facility in Harmans, Maryland. A memorandum from T. Meyer and D. Healy of the Department of Health and Mental Hygiene detailing the State's review of the proposed pad, was attached to the letter. We would like to take this opportunity to respond to the concerns raised in the review.

COMMENT:

As discussed and agreed upon, an additional shallow monitoring well is needed to assess the groundwater table and quality in the northeast corner of the property. It must be assured that the construction of the concrete pad will not restrict or interfere with the location of the monitoring well.

RESPONSE:

We will assure that construction of the concrete pad will not restrict or interfere with the location of the monitoring well.

AR300145

OSMOSE TREATMENT SPECIALISTS

P O. BOX 58 SHIPLEY AVENUE HARMANS MARYLAND 21077 PHONE 301 768 4000 (BALT.) 301 261 2981 (WASH.)

COMMENT:

MAWP, in conjunction with OSMOSE, have previously collected and analyzed 36 soil samples in the vicinity of the proposed pad. The results from these analysis "are well below the limit of hazardous waste." (OSMOSE letter, February 6, 1986). However MD WMA has some concern about these sample results.

There is no assurance that contamination does not exist at depth in this area. Preliminary sampling has only extended to a depth of 2 feet and there has been no remote sensing (resistivity) of this portion of the site to make an interpretation. Since metals may tend to pass through the unsaturated zone and precipitate deeper near the water table, additional samples at depth are required.

RESPONSE:

Several independent studies have found that chromium, copper, and arsenic tend to be relatively immobile in soil (Sandberg and Allen, 1975; Walsh and Keeney, 1975; Bartlett and Kimble, 1976; and DeGroot and other, 1979). This would indicate that if a spill had occurred in the vicinity of the proposed pad, the surface soil would remain the most contaminated section of the soil profile, and the 36 soil samples would have detected this contamination.

As indicated in the Work Plan, a minimum of 3 soil samples will be collected at depth. Analysis of these samples will indicate whether CCA tends to precipitate near the surface or near the water table at the Mid-Atlantic Wood Preservers site.

COMMENT:

The samples were analyzed for only chromium, copper and arsenic via the EPTOX method. Additional sampling should include more parameters (such as specific conductance, pH, organic compounds, total metals).

RESPONSE:

The samples were analyzed for chromium, copper, and arsenic because these are the contaminants of concern at the site. The EPTOX method was chosed because it gives the best indication of the mobility of metals in the soil and because it is the EPA specified method for determining if a substance is a hazardous waste. Specific conductance is generally only useful as a relative indicator of contamination. It is also generally only used as a screening parameter when more specific parameters such as chromium, copper, and arsenic can not be tested for. In some situations pH is also used as an indicator parameter. Thirty-four measurements of pH of ground water at the site ranged from 4.3 to 6.6 (Vroblesky, 1979), within the normal range for this area (Lucas, 1976). We do not think that pH is a particularly useful parameter for this site. As discussed in our meeting of April 12, although there has been no significant use of organics at the site, we intend to perform organic analysis of one upgradient and one downgradient water sample to determine if organic contaminants are present at the site.

COMMENT:

No samples have been taken either adjacent to and up against the existing pad, or the building. Any leakage of woodtreating solutions from the pad would be concentrated in these areas.

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RESPONSE:

We propose that before construction of the new pad begins, soil samples be collected from the edge of the existing pad and building, and analyzed for chromium, copper, and arsenic by EPTOX. Figure 1 shows the proposed locations of these samples. There are three locations at which two samples each will be taken at the surface and at a depth of 3 feet, making a total of 6 samples. If the soil is determined to be a hazardous material by RCRA standards (5 ppm chromium, copper, or arsenic in the EPTOX leachate) then the material will be drummed and shipped to an appropriate disposal site.

COMMENT:

There have been no background soil samples collected from which to compare the results.

RESPONSE:

Numerous soil samples have been collected in the past which show very low or undetectable levels of chromium, copper, and arsenic. We feel that these are representative of background concentrations of these substances.

COMMENT:

All considerations of contamination have been directed toward CCA-based woodtreating solutions. Currently, MAWP is using a new type of treatment called "Sun Wood". Potential impact from this use must also be considered.

RESPONSE:

The "Sun Wood" treatment process is identical to standard CCA treatment except for the addition of a coloring agent used to give the wood a more natural color. This color addition is non hazardous as indicated in the attached materials safety data sheet. Additionally, as stated above, the ground water at the site will be tested for organics to determine if organic contaminants are present at the site.

After you have examined the above, we would appreciate hearing from you within the next ten days. We anticipate starting our investigatory work at that time.

We hope that our proposed investigation of the pad area will provide you with adequate information for you to determine that we may proceed ahead with the construction of the pad. We will inform you of our sampling and analyses schedule in the near future.

Yours very truly,

Bernard Liedman
President

CC:	Mr. Michael Powell	Asst. Attorney General
	Mr. David Healy	Waste Mgmt. Administration
	Mr. Ted Meyer	Waste Mgmt. Administration
	Mr. Hector Abreu	U S E P A
	Mr. Tom Marr	Osmose Wood Preserving Div.
	Dr. Harsh Gill	Dames & Moore

AR300149

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REFERENCES

Bartlett, R.J. and J.M. Kimble. 1976. "Behavior of Chromium in Soils". J. Environ. Qual 5:383-386.

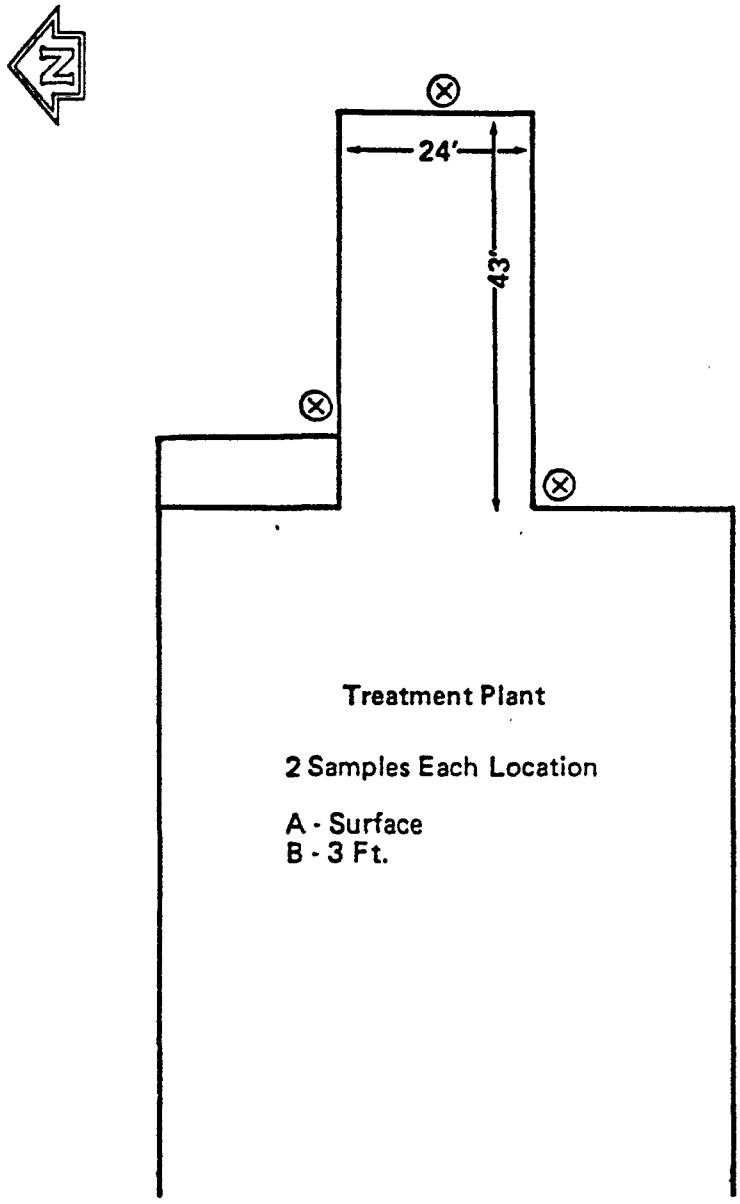
DeGroot, R.C., T.W. Popham, L.R. Gjovik and T. Forehand. 1979. "Distribution of GRadients of ARsenic, Copper and Chromium around Preservative-Treated Wooden Stakes." J. Environ. Qual. 8 39-41.

Lucas, R.C. 1976. "Anne Arundel County Ground-Water Information: Selected Well Records, Chemical - Quality Data, Pumpage Appropriation Data, and Selected Well Logs." Maryland Geological Survey, Water Resources Basic Data Report No. 8.

Sandberg, G.R. and I.K. Allen. 1975. "A Proposed Arsenic Cycle in an Agronomic Ecosystem" p124-127. In E.A. Woolson (ed.) Arsenical Festicides. ACS Symp. Ser. No. 7. Am. Chem. Soc. Washington, D.C. 176p.

Vroblesky, D. 1979. "Report on Field Investigation of Ground-Water Contamination at the Morehead Well, Harmans, Maryland." Maryland Water Resources Administration Hazardous Substance Field Services, February 15.

Walsh, M. and D.R. Keeney. 1975. "Behavior and phytotosicity of inorganic arsenicals in soils. p. 35-52. I in E.A. Woolson (ed.) (see above).



⊗ Soil Sampling Location

AR300151

FIGURE 1
PROPOSED SOIL SAMPLING LOCATIONS AROUND PERIMETER OF EXISTING PAD

Dames & Moore

OSMOSE

MATERIAL SAFETY DATA SHEET

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	B

H.M.I.S. N.P.C.A.

Notice: The information herein is given in good faith but no warranty, express or implied, is made.

SECTION I — PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: OSMOSE WOOD PRESERVING, INC.	EMERGENCY TELEPHONE NO.: (716) 882-5905
ADDRESS: 980 ELLICOTT ST., BUFFALO, NY 14209	DATE FORM WRITTEN: 7/1/88
TRADE NAME SUNWOOD® ADDITIVE	SYNONYMS

SECTION II — HAZARDOUS INGREDIENTS*

MATERIAL AND COMPONENT	CAS NO.	%	TLV (UNITS)	RQ
NONE TO THE BEST OF OUR KNOWLEDGE				
BASED ON REVIEW OF SUPPLIER MATERIAL				
SAFETY DATA SHEETS.				

CARCINOGEN?: NONE LISTED

D.O.T. CLASSIFICATION: COLOR ADDITIVE (COMMON DYE) D.O.T. LABEL: NONE

SECTION III — PHYSICAL DATA

BOILING POINT 760MM HG N/A	MELTING POINT N/A
SPECIFIC GRAVITY (H_2O = 1) ~ 0.5	VAPOR PRESSURE N/A
VAPOR DENSITY (AIR = 1) N/A	SOLUBILITY IN H_2O % BY WT. SOLUBLE
% VOLATILES BY VOL. N/A	EVAPORATION RATE (BUYLY ACETATE = 1) N/A
APPEARANCE AND ODOR POWDER-MILD ODOR	Ph (AS IS) N/A Ph (1% SOLN.) N/A

SECTION IV — FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD) N/A	AUTOIGNITION TEMPERATURE N/A	
FLAMMABLE LIMITS IN AIR % BY VOL.	LOWER N/A	UPPER N/A

EXTINGUISHING MEDIA: ☒ WATER FOG ☐ ALCOHOL FOAM ☒ DRY CHEMICAL ☐ FOAM ☒ CO_2 ☐ OTHER

SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR FULL PROTECTIVE CLOTHING INCLUDING SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARD: DURING A FIRE, IRRITATING AND/OR TOXIC GASES FROM THE DECOMPOSITION/ COMBUSTION OF PRODUCTS MAY BE PRESENT.

AR300152

SECTION V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	OSHA TLV	ALCGIH TLV
SEE SEC II	SEE SEC II	SEE SEC II

POTENTIAL ROUTES OF ENTRY AND EFFECTS OF EXPOSURE	ALTHOUGH THIS PRODUCT HAS A RELATIVELY LOW TOXICITY, IT MAY BE IRRITATING TO EYES, SKIN AND UPPER RESPIRATORY TRACT. SEE SECTION VIII.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE	PRE-EXISTING RESPIRATORY DISEASE INCLUDING ASTHMA AND EMPHYSEMA
EMERGENCY AND FIRST AID PROCEDURES	EYES: FLUSH WITH PLENTY OF WATER - CONTACT A PHYSICIAN. SKIN: WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. WASH BEFORE REUSE. INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CONTACT A PHYSICIAN.

SECTION VI — REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID N/A
	STABLE	X	

INCOMPATABILITY (Materials to avoid) N/A

HAZARDOUS DECOMPOSITION PRODUCTS N/A

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID N/A
	WILL NOT OCCUR	X	

SECTION VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED SWEEP UP WASTE AND PLACE IN AN APPROPRIATE MARKED CONTAINER. WEAR RESPIRATORY PROTECTIVE DEVICE.

WASTE DISPOSAL METHOD
Dispose in accordance with all Federal, State and Local laws. UNCONTAMINATED WASTE: SANITARY LANDFILL.

WASTE CONTAMINATED WITH CCA: HAZARDOUS WASTE LANDFILL.

SECTION VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) CHEMICAL CARTRIDGE RESPIRATOR EQUIPPED FOR AMINE VAPOR WITH DUST PRE-FILTER.

VENTILATION	LOCAL EXHAUST N/A	SPECIAL N/A
	MECHANICAL (General) N/A	OTHER N/A

PROTECTIVE GLOVES RUBBER	EYE PROTECTION CHEMICAL GOGGLES

OTHER PROTECTIVE EQUIPMENT AS NECESSARY TO AVOID DERMAL CONTAMINATION.

SECTION IX — SPECIAL INSTRUCTIONS OR OTHER PRECAUTIONS

HYGIENIC PRACTICES IN HANDLING & STORAGE: STORE IN COOL DRY PLACE AWAY FROM FOOD AND DRINK. OBSERVE GOOD PERSONAL AND INDUSTRIAL HYGIENE.

PRECAUTIONS FOR PROPER MAINTENANCE OF CONTAMINATED EQUIPMENT: KEEP CONTAINER CLOSED.

AR300153

See product label